

# Claims

[c1] 1. A magazine-based data cartridge library comprising:  
a frame;  
a shelf system, operatively attached to said frame, for supporting at least two data cartridge magazines and comprising at least one shelf;  
a drive that is operatively attached to said frame;  
a cartridge transport device, operatively attached to said frame, for moving a data cartridge between a data cartridge magazine and said drive;  
a magazine transport device, operatively attached to said frame, for moving a data cartridge magazine; and  
an operator alterable space located with a space defined by said frame;  
wherein said operator alterable space comprises a library mounting structure for receiving a module, a first side that is exposed to said cartridge transport device and a second side that allows an operator to attach a module to said mounting structure.

[c2] 2. A magazine-based data cartridge library, as claimed in claim 1, further comprising:  
a magazine bay assembly module comprising:  
a housing that defines an interior space that is capable of accommodating a data cartridge magazine and an opening for

receiving a data cartridge magazine;  
said housing structure comprising a magazine bay mounting structure for interfacing with said library mounting structure such that when said magazine bay assembly module is mounted within said space defined by said frame, said opening is exposed to at least one of said magazine transport device and said cartridge transport device.

[c3] 3. A magazine-based data cartridge library, as claimed in claim 2, wherein:  
said magazine bay assembly module comprising a bay guide that is located within said housing and capable of cooperating with a magazine guide for orienting a data cartridge magazine within said housing.

[c4] 4. A magazine-based data cartridge library, as claimed in claim 2, wherein:  
said magazine bay assembly comprising a plurality of bays; wherein each of said plurality of bays is capable of accommodating a data cartridge magazine.

[c5] 5. A magazine-based data cartridge library, as claimed in claim 1, further comprising:  
a drive bay assembly module comprising:  
a housing structure that defines a first open side, a second open side, and a passageway extending between said first and second open sides;

said housing structure comprising a drive bay mounting structure for interfacing with said library mounting structure such that when said drive bay assembly module is mounted within said space defined by said frame, said first open side is exposed to said cartridge transport device and said second open side is exposed to said space that is operator accessible; a housing plug that is attached to said housing and faces said second open side; and

a sled for holding a drive that has a front side with a receptacle for receiving a data cartridge and a back side with a plug interface for receiving electrical signals;

said sled comprising:

a sled frame that extends from a first end to a second end and is capable of holding a drive such that the receptacle of a drive is adjacent to said first end and the plug interface of the drive is adjacent to said second end; and

electrical connection means for establishing an electrical connection between the plug interface of a drive and a sled plug that faces toward said first end of said sled and is capable of mating with said housing plug;

wherein when said sled is positioned in said passageway such that said first end of said frame is adjacent to said first open side and said second end of said frame is adjacent to said second open side, said housing plug faces said sled plug.

[c6] 6. A magazine-based data cartridge library, as claimed in claim 1, further comprising:

- a drive bay assembly comprising:
  - a housing structure that defines a first open side, a second open side, and a plurality of drive bays, each extending between said first and second open sides;
  - said housing structure comprising a drive bay mounting structure for interfacing with said library mounting structure such that when said drive bay assembly module is mounted within said space defined by said frame, said first open side is exposed to said cartridge transport device and said second open side is exposed to said space that is operator accessible;
  - a plurality of housing plugs that are each attached to said housing and face said second open side,
- wherein one of said plurality of plugs is associated with each of said plurality of drive bays;
- a plurality of sleds, each capable of holding a drive that has a front side with a receptacle for receiving a data cartridge and a back side with a plug interface for receiving electrical signals;
- wherein each of said plurality of sleds comprising an electrical connection means for establishing an electrical connection between the plug interface of a drive and a sled plug that is capable of mating with one of said plurality of housing plugs.

[c7] 7. A magazine-based data cartridge library, as claimed in

claim 6, wherein:

said drive bay assembly comprising a processor, attached to said housing, for distributing electrical signals to each of said plurality of housing plugs.

[c8] 8. A magazine-based data cartridge library, as claimed in claim 7, wherein:

said housing comprising a processor bay for holding said processor;

wherein said processor bay defining an opening that is exposed to a space that is operator accessible.

[c9] 9. A magazine-based data cartridge library, as claimed in claim 8, wherein:

said processor comprising a handle for facilitating insertion/removal of a portion of said processor through said opening.